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10/624,486

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Hiroyasu Abe

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EXAMINER

CROUSE, BRETT ALAN

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

02/27/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/624,486 | Applicant(s) ABE ET AL. | |
| | Examiner Brett A. Crouse | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the amendment, filed 26 November 2007, which amends claim 1. Claims 1-13 are pending.

Response to Amendment

The rejection of claims 1-13 under 35 U.S.C. 103(a) as being unpatentable over Yamada, US 6,008,440, in view of Ciani, EP 0711655 A2, and further in view of Coe, US 5,018,422, is withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada, US 6,008,440 hereinafter known as Yamada, in view of Ciani, EP 0711655 A2 hereinafter known as Ciani, and further in view of Mass, Weight, Density, or Specific Gravity of Wood, http://www.simetric.co.uk/si_wood.htm , hereinafter known as Si_Wood.

Yamada teaches:

Art Unit: 1794

Column 2, lines 1-14, column 3, lines 19-54, column 6, lines 1-11, teach a method for making wood elements for musical instruments by laminating resin coated wooden plate units and bonding via pressure.

Column 3, line 49, teaches pressure bonding means.

Column 4, line 54, teaches body density.

As to claims 3, 4, 5, 8-11:

Column 5, lines 5-62 and column 6, lines 26-49, a violin comprising laminated wooden plates. The passage additionally teaches a multi-lamination process.

Yamada does not teach thermal press bonding or dyeing. Yamada also does not provide a fiber orientation.

Ciani teaches:

Column 2, lines 1-4, column 3, lines 36-43, teach laminating wooden plate units by thermal press bonding at various temperatures and pressures.

Column 3, lines 25-31, column 4, lines 44-45, column 5, lines 6, 27, examples 1, 2, 3, teach alignment of the wood fibers of adjacent plates parallel to one another. The examples additionally teach a wood density prior to pressing.

The examples teach the wood/resin structure is compacted when pressed.

Sample calculation based on example 1 of Ciani:

14 layers of Ash x 0.6mm thick = 8.4mm total thickness prior to compression

Art Unit: 1794

$8.4\text{mm}/5\text{mm} \times (670 \text{ kg/m}^3 \text{ density of Ash}) = 1125 \text{ kg/m}^3 = 1.125 \text{ g/cm}^3$ after compression as in example 1.

Column 5, lines 44-45, example 4, teaches dyeing the wooden sheets in a vat prior to impregnating with resin and forming a laminate. The passage additionally teaches the laminate can be further bonded.

As one of ordinary skill understands that different wood thicknesses affects vibration characteristics and thereby tone, it would have been obvious to one of ordinary skill in the art to select a thickness of wood laminate suitable for the manufacture of the desired instrument.

It would have been obvious to one of ordinary skill in the art to align the wood fibers to provide a uniform appearance to the edges of the layers over the surface of the violin of Yamada as taught be Ciani.

As to claims 2 and 7:

Column 1, lines 50-58, teach the use of paper in the laminate layers.

Si_Wood teaches:

The density of White Ash is 670 kg/m^3 .

The reference teaches a range of wood densities from 170 to 1370 kg/m^3 depending on the species of wood.

Art Unit: 1794

As to claim 6 and 13:

It would have been within the level of one of ordinary skill in the art to optimize the process of Yamada/Ciani by selecting a species of wood and compression pressure which when employed as taught by Yamada/Ciani would result in a compressed sheet/laminate having a pre-selected density within the ranges as taught in the instant invention.

Response to Arguments

With respect to the Yamada and Ciani references applicant argues that the limitations of dyeing prior to resin impregnation, fiber alignment, and the density of the resulting laminates is not taught or suggested by the cited references. The rejection has been updated to directly point to and more clearly address the limitations. With respect to the fiber alignment, Ciani teaches as prior art a fiber cross plied laminate and fibers in parallel alignment in his examples. The fibers in parallel alignment are chosen to improve appearance of the final laminate. Ciani does not restrict the fiber alignment with respect to processability either in the specification or claims.

With respect to the Yamada and Ciani references applicant argues that the limitation of the laminate thickness is not addressed by the rejection. The examiner respectfully disagrees. The examples of Ciani are based on laminating 14 sheets of material, however, Ciani does not limit the method of his invention to a set number of layers. Additionally, in example 4 Ciani teaches that the laminate product can be further bonded.

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brett A. Crouse whose telephone number is (571)-272-6494. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. A. C./

Examiner, Art Unit 1794

/Terrel Morris/
Supervisory Patent Examiner
Group Art Unit 1794